

IN THE CLAIMS

Please rewrite claims 1, 5 and 7 as follows:

B₁ Claim 1 (Currently Amended) A hybrid composite flywheel rim comprising:
a cylindrical fiber-wound structure having at least two different types of fibers, including a first fiber type and a second fiber type, impregnated with a thermosetting resin such as epoxy resin and wound in an annulus on a mandrel, said two different fibers having different elastic moduli;

said fiber is distributed in said cylindrical fiber-wound structure as bands of tows, each tow having only a single type of fiber, said tows lying in a lay-up pattern that is defined by the correlation between lead rate per mandrel revolution and winding length to produce a random distribution of said first fiber type being randomly distributed amongst said second fiber type macroscopically.

Claims 2-4 (canceled)

Claim 5 (Currently Amended) A hybrid composite flywheel rim, comprising:
fibers having different elastic moduli, said fibers including carbon fiber, and at least one other fiber including glass fiber, said fibers fixed in a matrix of thermosetting resin such as epoxy resin;

said fiber is distributed in said cylindrical fiber-wound structure as bands of tows, each tow having only a single type of fiber, and said carbon fiber is distributed amongst the other fiber in a cross hatch pattern macroscopically.

6. (Original) A hybrid composite flywheel rim as defined claim 5, wherein:
the following equation is satisfied:

$$W_L = (N + B/A) \cdot L_R$$

$$W_L + L_R < L_m$$

N : Maximum integer obtained when W_L is divided by L_R

A : integer larger than B

B : integer smaller than A

$B/A \neq 1, 1/2, 1/3, 1/4$

B1
canceled

W_L : Winding Length (inch)

L_R : Lead Rate (inch)

L_m : Distance between inner faces of two mandrel flanges (inch)

$$m \cdot L_R = n \cdot S_p$$

m : integer ≥ 2

n : integer ≥ 2

S_p : fiber space amongst other fiber (inch)

7. (currently amended) A composite flywheel rim, comprising:

an annular structure having a plurality of zones, each with multiple fiber layers in a resin matrix, each said fiber layer having a mixture of carbon fiber tows and glass fiber tows wound in a fiber band with a predetermined lead rate into said annular structure, said band having a ratio of tows that is constant in each layer of any single zone, and said ratio incrementally increases zone-by-zone radially toward outside zones of said rim;

wherein said predetermined lead rate, in correlation with the winding length, ensures that said carbon fiber tows lie in a macroscopically uniform distribution in each zone by controlling the correlation between lead rate of the fiber band as it is wound onto the mandrel per mandrel revolution and the winding length.